

**Preliminary Determination on the Permit Revision Request #2 Application of**

**DaikyoNishikawa USA, Inc. (DNUS)**

**Huntsville, Alabama**

**7-08-P391-Z401, Z402, Z403, Z404**

**ON SITE PARTNER (OSP-4): Plastic Shop**

**Z401** – Toyota Line Plastic Parts Spray Booth and Oven with Thermal Oxidizer (Waterborne Option) (Unit OSP-4-T3)

**Z402** – Toyota Line Plastic Parts Spray Booth and Oven with Thermal Oxidizer (Solvent-borne Option) (Unit OSP-4-T3)

**Z403** – Mazda Line Plastic Parts Spray Booth and Oven with Thermal Oxidizer (Waterborne Option) (Unit OSP-4-M4)

**Z404** – Mazda Line Plastic Parts Spray Booth and Oven with Thermal Oxidizer (Solvent-borne Option) (Unit OSP-4-M4)

**Natural Resources and Environmental Management**

**City of Huntsville**

**320 Fountain Circle SW**

**Huntsville, AL 35801**

**August 2021**

## TABLE of CONTENTS

### **Engineering Analysis**

Introduction.....	1
Permitting History.....	2
Current Proposed Revisions.....	3
BACT Evaluation Requirements .....	4
Air Quality Impact Analysis Requirements.....	5
Summary .....	6

### **Draft Permits**

- Air Permit No. 7-08-P391-Z401: ON SITE PARTNER (OSP-4): Plastic Shop: Toyota Line  
Plastic Parts Spray Booth and Oven with Thermal Oxidizer  
(Waterborne Option) (Unit OSP-4-T3)
- Air Permit No. 7-08-P391-Z402: ON SITE PARTNER (OSP-4): Plastic Shop: Toyota Line  
Plastic Parts Spray Booth and Oven with Thermal Oxidizer  
(Solvent-borne Option) (Unit OSP-4-T3)
- Air Permit No. 7-08-P391-Z403: ON SITE PARTNER (OSP-4): Plastic Shop: Mazda Line  
Plastic Parts Spray Booth and Oven with Thermal Oxidizer  
(Waterborne Option) (Unit OSP-4-M4)
- Air Permit No. 7-08-P391-Z404: ON SITE PARTNER (OSP-4): Plastic Shop: Mazda Line  
Plastic Parts Spray Booth and Oven with Thermal Oxidizer  
(Solvent-borne Option) (Unit OSP-4-M4)

## **Engineering Analysis**

### **DAIKYONISHIKAWA USA, INC. (DNUS) Permit Nos. 7-08-P391-Z401, Z402, Z403, & Z404**

#### **INTRODUCTION:**

A Prevention of Significant Deterioration (PSD) of Air Quality Permit revision application was received from DaikyoNishikawa USA, Inc., (DNUS) by the City of Huntsville Department of Natural Resources and Environmental Management (DNREM or “Department”) on August 24, 2021, for the revision of four (4) existing PSD Permits issued to DNUS. DNUS is currently under construction on a motor vehicle assembly campus located at 9000 Greenbrier Parkway NW, Unit #95, Huntsville, Limestone County, AL 35756, approximately four (4) miles west of the Huntsville, Alabama, airport (DNUS Revision Request #2). The company is an “On Site Partner” (OSP) to the joint venture (JV) between Mazda Motor Corporation and Toyota Motor Corporation (MTMUS), and is one of several support entities/facilities located on property under common control that will wholly make parts for MTMUS (“MTMUS Campus”). The Campus is under initial construction, and production operations on Campus are anticipated to begin in the Fall of 2021.

#### **PERMITTING HISTORY:**

##### *INITIAL PERMITTING (PERMITS ISSUED DECEMBER 2018)*

The original permitting effort resulted in twenty-two (22) Prevention of Significant Deterioration (PSD) of Air Quality Permits being issued for the various operations to be conducted to facilitate the production of automobiles on the MTMUS Campus, including parts pressing/stamping, parts/body welding, injection molding, painting/coating, component/body assembly, tire assembly, miscellaneous natural gas fired combustion equipment (HVAC), and emergency equipment. Seven (7) of the original twenty-two (22) permits are held by DNUS. For regulatory applicability purposes, the MTMUS Campus (i.e., the MTMUS JV facility, DNUS, and the other OSP facilities located on site under common property control) is considered one major stationary emission source for the purposes of PSD applicability and any required Best Available Control Technology (BACT) or air quality impact analyses performed.

In the initial permitting process, the MTMUS Campus was deemed a major source under PSD since the potential emissions of volatile organic compounds (VOCs - ozone) was greater than 250 TPY. Particulate matter (PM), carbon monoxide (CO), and nitrogen oxides (NO<sub>x</sub>) potential emissions were also estimated to exceed the 10 TPY (PM<sub>2.5</sub>), 100 TPY, and 40 TPY de minimis levels, respectively. Therefore, Best Available Control Technologies (BACT) were required to be installed/implemented on all significant sources of VOCs, PM, CO, NO<sub>x</sub>, and greenhouse gases (GHGs), in accordance with the City of Huntsville Air Pollution Control Rules and Regulations (COHRAR) Section 3.5.4. Therefore, all significant sources of these pollutants underwent BACT analysis, and limitations and good work practices were incorporated into the campus-wide permits.

In accordance with the City of Huntsville Air Pollution Control Rules and Regulations (COHRAR) Section 3.5.5 through 3.5.9., an ambient air impact analysis was performed and submitted with the

## Engineering Analysis

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initial application for construction, and the impact of the facility on air quality, visibility, soils, and vegetation was assessed. The predicted ambient impacts of the source were projected to be in the immediate area of the source and were relatively minor, so no discernible impacts are expected. As the plant will be located less than 100 km (at 58.6 km) from the nearest Class I area (Sipsey Wilderness in northwest Alabama), the facility was also evaluated to determine if it would adversely affect visibility in this area in accordance with the City of Huntsville Air Pollution Control Rules and Regulations (COHRAR) Section 3.5.10. Preliminary reports from the Federal Land Manager (FLM) indicated there was no need for further evaluation.

Since the original permitting effort in December of 2018, two (2) revision requests for the MTMUS Campus as a whole have been processed (MTMUS Campus Revision Request #1 and MTMUS Campus Revision Request #2). The JV facility has had one (1) revision request that has been processed (submitted as Revision Request #3 and documented with DNREM as JV Revision Request #1). This current revision request submitted by DNUS is documented as DNUS Revision Request #2. DNUS currently has one (1) proposed new PSD Permit under Public Notice for the addition of two (2) touch-up coating booths proposed in the DNUS Revision Request #1 Application.

#### *MTMUS CAMPUS REVISION REQUEST #1 (PERMITS ISSUED NOVEMBER 2019)*

As a result of the MTMUS Campus Revision Request #1, one (1) permit covering proposed miscellaneous natural gas fired combustion sources to be operated by DNUS and five (5) other permits covering the same for the JV facility and several other OSPs were revised and issued in November of 2019. This revision required reevaluation of NO<sub>x</sub> BACT limits due to vendor inability to meet the originally permitted 0.05 lb NO<sub>x</sub>/MMBtu for the HVAC units.

It should be noted that the NO<sub>x</sub> BACT limitation for all HVAC units across the Campus was updated from 0.05 lb NO<sub>x</sub>/MMBtu to 0.06 lb NO<sub>x</sub>/MMBtu; however, the number of HVAC units and respective burner ratings across the Campus were updated based on more refined plant/building engineering design. DNREM reviewed the proposed BACT limitation revision for the HVAC burners against the RACT, BACT, LAER Clearinghouse (RBLC) and concurred that the requested change was BACT for this equipment. Regardless of the increase in the NO<sub>x</sub> limitation, Campus-wide emissions did not increase due to this change because the Campus-wide HVAC heat input decreased. Therefore, there was no significant change in potential NO<sub>x</sub> emissions from the Campus, and the potential emissions from all other regulated air pollutants from the Campus decreased. Due to potential emissions of regulated air pollutants either remaining essentially unchanged or decreasing across the Campus, a revised air quality impact analysis was not required to be performed and submitted with the MTMUS Campus Revision Request #1.

## **Engineering Analysis**

### **DAIKYONISHIKAWA USA, INC. (DNUS) Permit Nos. 7-08-P391-Z401, Z402, Z403, & Z404**

#### *MTMUS CAMPUS REVISION REQUEST #2 (PERMITS ISSUED JULY 2020)*

As a result of the MTMUS Campus Revision Request #2, one (1) permit covering operations to be conducted by DNUS and eight (8) other permits for operations to be conducted by the JV facility and several other OSPs were revised, and four (4) new permits were issued to several other OSPs in July of 2020. The revision to the permit covering DNUS operations resulted from the proposed addition of a jig cleaning operation, which included a new natural-gas burner.

It should be noted that the four (4) new permits issued to several other OSPs were the result of reassigning responsibility of emergency equipment and one (1) HVAC source from the JV facility to the OSPs. There was no increase in production or change in operations associated with these permits. The revised JV facility permits were a result in proposed increased usage of an already permitted sealer material, correction of an initially permitted BACT limit associated with an offline repair touch-up booth material, addition of a replacement parts operation using a sealer material, change in heat inputs and BACT limits (due to vendor inability to meet the originally permitted rates) for some of the natural gas process equipment, updating of power ratings for some emergency equipment and the addition of natural gas-fired emergency generators, and a decrease in vehicle fluid storage capacity. The revisions to the OSP permits, including that for DNUS as described above, included the relocation of one (1) HVAC unit from the roof to the ground and the addition of a cooling tower, shot blasting operation, and jig cleaning operation. Due to an increase in VOC emissions on the Campus not related to DNUS, an updated ozone impact analysis was performed and showed a minimal effect on ambient ozone levels. Due to potential emissions of all other regulated air pollutants either remaining essentially unchanged or decreasing across the Campus, a revised air quality impact analysis was not required to be performed and submitted with the MTMUS Campus Revision Request #2.

#### *JV REVISION REQUEST #1 (submitted as “Air Permit(s) Revision Request #3”; PERMITS ISSUED AUGUST 2021)*

On November 16, 2020, MTMUS applied for revisions to several of the JV facility permits under “Air Permit(s) Revision Request #3.” In order to track the various applications and distinguish between the Campus-wide applications, those affecting just the JV facility, and those associated with individual OSPs only, DNREM has renamed this application “JV Revision Request #1,” as it is the first application submitted for the JV facility only and no future revision applications covering more than one entity are expected. Therefore, the proposed revisions in JV Revision Request #1 do not affect any of the permits held by DNUS or the other OSPs. An air quality impact evaluation was not required for these changes, as there was no significant increase in potential emissions of criteria pollutants.

## **Engineering Analysis**

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#### ***DNUS REVISION REQUEST #1 (PERMIT CURRENTLY UNDER SEPARATE PUBLIC NOTICE PERIOD)***

On March 12, 2021, DNUS applied for issuance of one (1) new permit for two (2) touch-up coating booths to be located in the DNUS facility for applying touch-up coatings to repair parts produced by the slush molding and plastic parts manufacturing processes. The booths will utilize an air-drying process; therefore, there are no associated combustion sources. The DRAFT Permit and supporting documentation are currently under Public Notice and can be found under the City of Huntsville's Legal Notices webpage.

#### **CURRENT PROPOSED REVISIONS:**

DNUS Revision Request #2 requests revisions to the coating line zones to be controlled by the currently permitted thermal oxidizer on the DNUS coating lines. The current permits allow DNUS to change the number of thermal oxidizers and specific zones to be exhausted to the thermal oxidizers providing DNUS submits accurate descriptions of the zones and acquires updated permits prior to commencement of operations. No changes to the permitted paint line systems, production capacity, number of thermal oxidizers, or particulate control technologies are being proposed in this revision request. DNUS will still comply with all air permit limits applicable to the coating lines as currently permitted; therefore, no changes to permit limits are proposed in this revision request. DNUS currently holds seven (7) PSD Permits for their proposed coating operations, miscellaneous VOC usage, and miscellaneous natural gas fired combustion sources. There is one (1) proposed new permit for DNUS currently under separate public notice for the proposed installation of two (2) touch-up coating booths. No changes to the other three (3) existing DNUS Permits, the one (1) DRAFT DNUS Permit currently under public notice, the Permits held by the MTMUS JV facility, or the Permits held by other OSPs are proposed in this permitting effort.

The proposed changes in DNUS Revision Request #2 only affect Section III.B.7 in each of the four (4) permits under consideration for revision. These changes remove the Primer Booth and Basecoat Booth zones from thermal oxidizer control. The zones proposed for control are the Clearcoat Booths and Curing Ovens.

#### **BACT EVALUATION REQUIREMENTS:**

For DNUS Revision Request #2, no changes to control technology, work practices, potential emissions, emission limitations, or BACT limitations are proposed; therefore, a BACT evaluation was not required.

## **Engineering Analysis**

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#### **AIR QUALITY IMPACT ANALYSIS REQUIREMENTS:**

With regard to the proposed changes in this revision, an air quality impact evaluation was not required to be performed at this time, as there are no changes in potential emissions of any regulated pollutant proposed.

It should be noted that it was required in the initial permitting process for the Campus that a full revised air quality impact analysis reflecting as-built building and stack parameters, as well as final anticipated potential emissions for all applicable pollutants, be performed and submitted for approval to the DNREM prior to start of operations on the Campus. This as-built air quality impact analysis has been submitted and is currently under review by DNREM.

#### **SUMMARY:**

The PSD revision application (DNUS Revision Request #2) requesting the revision of four (4) existing PSD Permits to more accurately define the coating line zones to be controlled by the thermal oxidizer currently meets the following criteria:

1. BACT Re-evaluation: Not required as there are no proposed changes in control technology, work practices, emission levels, emission limits, etc.
2. Air Quality Impact Analysis: As the emission levels and emission limits associated with this revision request remain unchanged from what is currently permitted, and air quality impact analysis was not required. NOTE: As mentioned above, upon determination of final design specifications for the entire Campus, an updated full air quality impact evaluation was performed based on the final design specifications and permitted emissions and was submitted to DNREM for review. DNREM is currently in the process of reviewing this evaluation.

DNREM concurs with DNUS's determination that the proposed revisions with regard to DNUS Revision Request #2 will not require reevaluation of BACT or air quality impacts. It is recommended that the PSD Air Permits with the permit provisos in the attached Draft Permit Section be issued to DNUS as part of the MTMUS Campus since all applicable regulations would be met. Permit fees totaling \$11,310.00 were billed at the time of public notification of this permitting action.

# DRAFT PERMITS